

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/646,122	AWAD, NAGI M.	
	<b>Examiner</b>	<b>Art Unit</b>	

(b)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 01/19/05 and the interview of 02/04/05.
2.  The allowed claim(s) is/are 1-7, 9 and 11-50.
3.  The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
 of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6.  CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
    - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

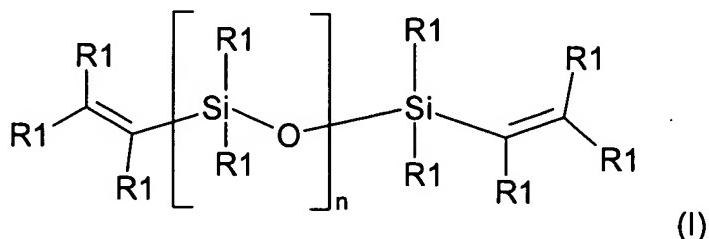
An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Irving Fishman on February 4, 2005.

Please replace all previous versions of the claims with the following:

1. (Previously presented) A cross-linked silicone gel substantially free of SiO<sub>2</sub> groups, substantially free of SiO<sub>1.5</sub> groups, and substantially free of polyalkyleneoxide groups, comprising a cross-linked polymerization product of

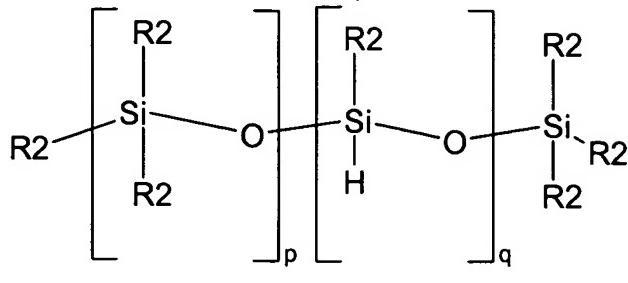
(A) (i) an  $\alpha,\omega$ -di lower alkenyl terminated polyorganosiloxane of formula I



having a molecular weight of about 20,000 to about 25,000 with n being about 265 to about 340 and each R1 being independently H, or an alkyl group of 1 or 3 carbons and

(ii) optionally an  $\alpha,\omega$ -di ethylene terminated polydiphenyldimethylorganosiloxane; and

(B) a polyorganohydrosiloxane of formula II



(II)

where the molecular weight of reactant II is about 3500 to 4000; q is about 5 to about 9; p is about 40 to about 50, and each R<sub>2</sub> is independently an alkyl of 1-3 carbon atoms;

said polymerization product being polymerized in the presence of a medium selected from the group consisting of hydrocarbon oils and mixtures thereof; and

(C) said medium

wherein said polymerization takes place initially with mixing and said mixing is halted when gelling is visibly seen.

2. (Previously presented) The silicone gel of claim 1 wherein after said polymerization, said gel is subjected to milling, said milling being conducted while said gel is in the swollen state.

3. (Previously presented) The silicone gel of claim 2 wherein said milling is conducted in a colloid mill.

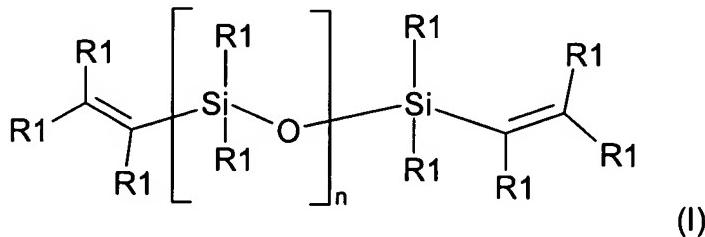
4. (Previously presented) The silicone gel of claim 1 comprising about 3% to about 15% of said polymer and about 97% to about 85% of said medium.

5. (Original) The silicone gel of claim 1 which is further diluted with a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, lower alkanols, and mixtures thereof.

6. (Previously presented) A cosmetic formulation comprising about 65% to about 99.9% of the silicone gel of claim 1, about 0.1% to about 30% of at least one cosmetically acceptable ingredient which cosmetic ingredient is not a low viscosity silicone oil, a hydrocarbon oil, or a lower alkanol, or mixtures thereof; and up to about 10% of a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, and lower alkanols.

7. (Previously presented) A method of making a clear silicone gel comprising

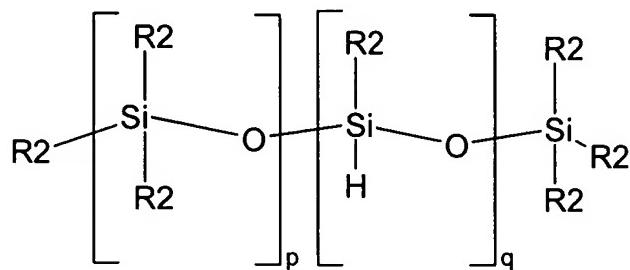
- (A) (i) polymerizing in the presence of a hydrosilylation polymerization catalyst and a medium selected from the group consisting of hydrocarbon oils, and mixtures thereof
- (1) an  $\alpha,\omega$ -di lower alkenyl terminated polyorganosiloxane of formula I



having a molecular weight of about 20,000 to about 25,000 with n being about 265 to about 340 and each R1 being independently H, or an alkyl group of 1 or 3 carbons and

(ii) optionally an  $\alpha,\omega$ -di ethylene terminated polydiphenyldimethylorganosiloxane; and

(2) a polyorganohydrosiloxane of formula II



(II)

where the molecular weight of reactant II is about 3500 to 4000; q is about 5 to about 9; p is about 40 to about 50; and each R2 is independently an alkyl having 1-3 carbon atoms resulting in a swollen gel;

- (B) milling said swollen gel; and
- (C) optionally diluting the result of step (B) with a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, and lower alkanols;

wherein said polymerization takes place initially with mixing and said mixing is halted when gelling is visibly seen.

8. Canceled

9. (Previously presented) The process of claim 7 wherein said milling said swollen gel step takes place in a colloid mill.

10. (Canceled)

11. (Previously presented) The process of claim 7 wherein said hydrosilylation catalyst is zero valent platinum divinyl complex.
12. (Previously presented) The process of claim 7 wherein said polymerization reaction takes place at about 20°C. to about 50°C.
13. (Original) The process of claim 7 wherein said reaction is permitted to proceed for at least 2 hours.
14. (Original) The process of claim 7 wherein said reaction is permitted to proceed for at least 3 hours.
15. (Original) The process of claim 7 wherein said reaction is permitted to proceed for at least 4 hours.
16. (Original) The process of claim 7 wherein said polymerization reaction is permitted to take place in the substantial absence of shearing forces.
17. (Original) The process of claim 7 further comprising adjusting the viscosity of gel by diluting said gel with a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, and lower alkanols to result in a diluted gel.
18. (Original) The process of claim 17 further comprising passing said diluted gel through a colloid mill.
19. (Currently amended) The silicone gel resulting from the process of claim 7, provided that when said optional dilution step (C) of claim 7 is utilized, said diluent is selected from the group consisting of hydrocarbon oils and lower alkanols.
20. (Currently amended) The silicone gel of claim 19 resulting from the process of claim 9 wherein said milling said swollen gel step takes place in a colloid mill.

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21. (Currently amended) The silicone gel of claim 19 further comprising adjusting the viscosity of said gel by diluting said gel with a diluent selected from the group consisting of hydrocarbon oils, and lower alkanols to result in a diluted gel resulting from the process of claim 17.

22. (Currently amended) The silicone gel of claim 21 further comprising passing said diluted gel through a colloid mill resulting from the process of claim 18.

23. (Previously presented) A cosmetic composition incorporating said silicone gel of claim 1.

24. (Currently amended) A cosmetic composition incorporating the silicone gel resulting from the process of claim 7 of claim 19.

25. (Currently amended) A cosmetic composition incorporating the silicone gel resulting from the process of claim 9 of claim 20.

26. (Currently amended) A cosmetic composition incorporating the silicone gel resulting from the process of claim 17 of claim 21.

27. (Currently amended) A cosmetic composition incorporating the silicone gel resulting from the process of claim 18 of claim 22.

28. (Previously presented) The silicone gel of claim 1 which is substantially clear.

29. (Previously presented) The silicone gel of claim 22 which is substantially clear.

30. (Previously presented) A method of use of the silicone gel of claim 1 comprising applying said gel to a rubber or rubber-like surface.

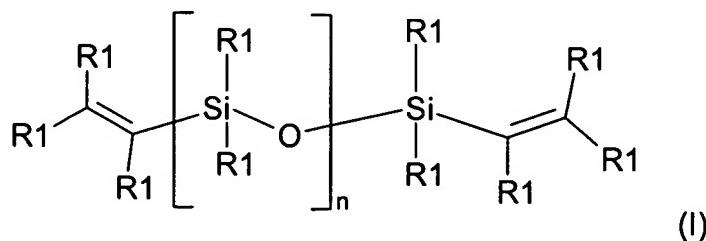
31. (Original) The method of claim 30 wherein said rubber or rubber-like surface is a member selected from the group consisting of tires, sealing rings, gaskets, weatherstripping, and caulking.

32. (Original) The method of claim 31 wherein said rubber or rubber-like surface is an automotive tire.

33. (Previously presented) A composition comprising the silicone gel of claim 1 along with components suitable for application to rubber or rubber-like surfaces.

34. (Previously presented) A cross-linked silicone gel substantially free of SiO<sub>2</sub> groups, substantially free of SiO<sub>1.5</sub> groups, and substantially free of polyalkyleneoxide groups, comprising a cross-linked polymerization product of

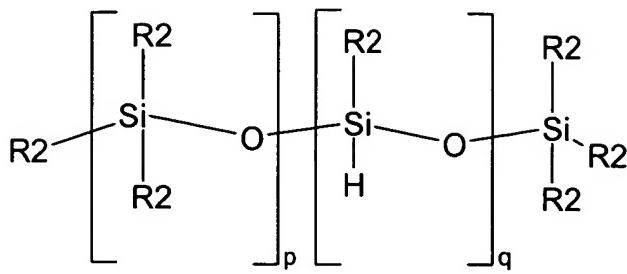
(A) (i) an  $\alpha,\omega$ -di lower alkenyl terminated polyorganosiloxane of formula I



having a molecular weight of about 20,000 to about 25,000 with n being about 265 to about 340 and each R1 being independently H, or an alkyl group of 1 or 3 carbons and

(ii) optionally an  $\alpha,\omega$ -di ethylene terminated polydiphenyldimethylorganosiloxane; and

(B) a polyorganohydrosiloxane of formula II



(II)

where the molecular weight of reactant II is about 3500 to 4000; q is

about 5 to about 9; p is about 40 to about 50, and each R2 is

independently an alkyl of 1-3 carbon atoms;

said polymerization product being polymerized in the presence of a medium selected from the group consisting of hydrocarbon oils, and mixtures thereof;

and

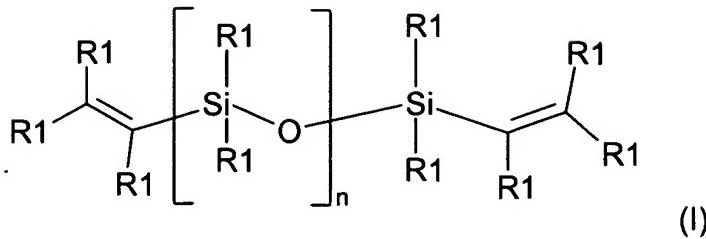
(C) said medium

wherein said polymerization reaction is permitted to take place in a manner in which a substantial portion of the reaction mass is not subject to substantial shearing forces.

35. (Previously presented) A method of making a clear silicone gel comprising

(A) polymerizing in the presence of a hydrosilylation polymerization catalyst and a medium selected from the group consisting of hydrocarbon oils, and a-mixtures thereof

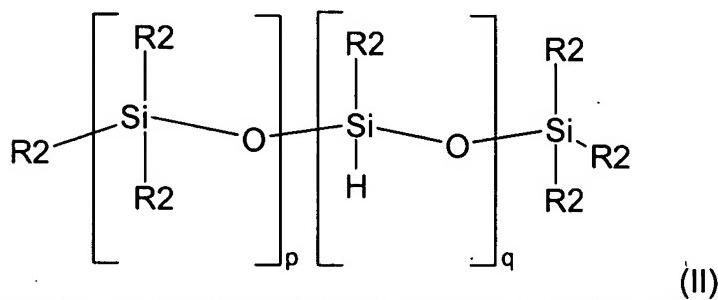
(1) (a) an  $\alpha,\omega$ -di lower alkenyl terminated polyorganosiloxane of formula I



having a molecular weight of about 20,000 to about 25,000 with n being about 265 to about 340 and each R1 being independently H, or an alkyl group of 1 or 3 carbons and

(b) optionally an  $\alpha,\omega$ -di ethylene terminated polydiphenyldimethylorganosiloxane; and

(2) a polyorganohydrosiloxane of formula II



where the molecular weight of reactant II is about 3500 to 4000; q is about 5 to about 9; p is about 40 to about 50; and each R2 is independently an alkyl having 1-3 carbon atoms resulting in a swollen gel;

(B) milling said swollen gel; and

(C) optionally diluting the result of step (B) with a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, and lower alkanols;

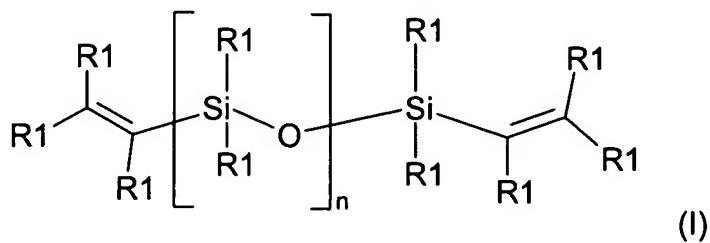
wherein said polymerization reaction is permitted to take place in a manner in which a substantial portion of the reaction mass is not subject to substantial shearing forces.

36. (Previously presented) The silicone gel of claim 34 wherein said polymerization reaction is permitted to take place in the substantial absence of shearing forces.

37. (Previously presented) The method of claim 35 wherein said polymerization reaction is permitted to take place in the substantial absence of shearing forces.

38. (Previously presented) A cross-linked silicone gel substantially free of  $\text{SiO}_2$  groups, substantially free of  $\text{SiO}_{1.5}$  groups, and substantially free of polyalkyleneoxide groups, comprising a cross-linked polymerization product of

(A) (1) an  $\alpha,\omega$ -di lower alkenyl terminated polyorganosiloxane of formula I

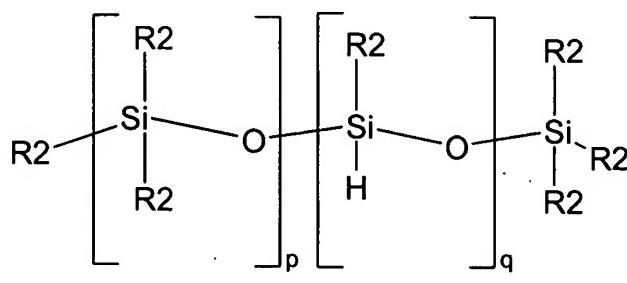


having a molecular weight of about 20,000 to about 25,000 with n being about 265 to about 340 and each R1 being independently H, or an alkyl group of 1 or 3 carbons;

(2) a member selected from the group consisting of mono- $\alpha$ -olefin, a polyalkoxylated mono- $\alpha$ -olefin, hydroxyl-terminated- $\alpha$ -olefin, and mixtures thereof; and

(3) optionally an  $\alpha,\omega$ -di ethylene terminated polydiphenyldimethylorganosiloxane; and

(B) a polyorganohydrosiloxane of formula II



(II)

where the molecular weight of reactant II is about 3500 to 4000; q is about 5 to about 9; p is about 40 to about 50, and each R2 is independently an alkyl of 1-3 carbon atoms;

said polymerization product being polymerized in the presence of a medium selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, and mixtures thereof; and

(C) said medium

wherein (1) said polymerization takes place initially with mixing and said mixing is halted when gelling is visibly seen or (2) said polymerization reaction is permitted

to take place in a manner in which a substantial portion of the reaction mass is not subject to substantial shearing forces.

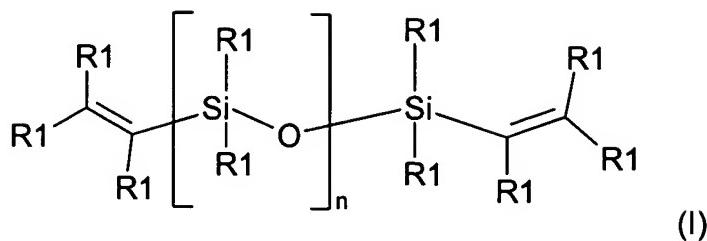
39. (Previously presented) The silicone gel of claim 38 which is further diluted with a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, lower alkanols, and mixtures thereof.

40. (Previously presented) A cosmetic formulation comprising about 65% to about 99.9% of the silicone gel of claim 38, about 0.1% to about 30% of at least one cosmetically acceptable ingredient which cosmetic ingredient is not a low viscosity silicone oil, a hydrocarbon oil, or a lower alkanol, or mixtures thereof; and up to about 10% of a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, and lower alkanols.

41. (Previously presented) A method of making a clear silicone gel comprising

- (A) polymerizing in the presence of a hydrosilylation polymerization catalyst and a medium selected from the group consisting of low viscosity silicone oil, hydrocarbon oil, and mixtures thereof
  - (1) (a) an  $\alpha,\omega$ -di lower alkenyl terminated polyorganosiloxane of formula I

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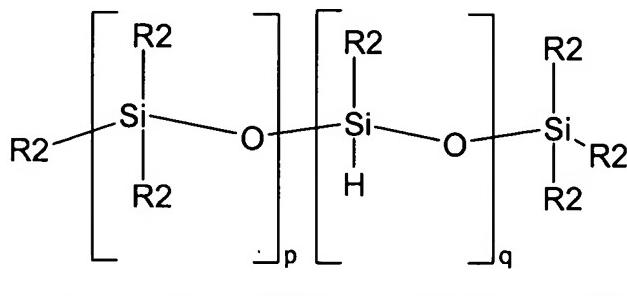


having a molecular weight of about 20,000 to about 25,000 with n being about 265 to about 340 and each R1 being independently H, or an alkyl group of 1 or 3 carbons;

(b) a member selected from the group consisting of mono- $\alpha$ -olefin, a polyalkoxylated mono- $\alpha$ -olefin, hydroxyl-terminated- $\alpha$ -olefin, and mixtures thereof; and

(c) optionally an  $\alpha,\omega$ -di ethylene terminated polydiphenyldimethylorganosiloxane; and

(2) a polyorganohydrosiloxane of formula II



where the molecular weight of reactant II is about 3500 to 4000; q is about 5 to about 9; p is about 40 to about 50; and each R2 is independently an alkyl having 1-3 carbon atoms resulting in the swollen gel of claim 38;

(B) milling said swollen gel; and

(C) optionally diluting the result of step (B) with a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, and lower alkanols;  
wherein (1) said polymerization takes place initially with mixing and said mixing is halted when gelling is visibly seen or (2) said polymerization reaction is permitted to take place in a manner in which a substantial portion of the reaction mass is not subject to substantial shearing forces.

42. (Previously presented) The process of claim 41 further comprising adjusting the viscosity of gel by diluting said gel with a diluent selected from the group consisting of low viscosity silicone oils, hydrocarbon oils, and lower alkanols to result in a diluted gel.

43. (Previously presented) The silicone gel resulting from the process of claim 41.

44. (Previously presented) The silicone gel resulting from the process of claim 42.

45. (Previously presented) A cosmetic composition incorporating said silicone gel of claim 38.

46. (Previously presented) A cosmetic composition incorporating the silicone gel resulting from the process of claim 41.

47. (Previously presented) A cosmetic composition incorporating the silicone gel resulting from the process of claim 42.

48. (Previously presented) The silicone gel of claim 38 which is substantially clear.

49. (Previously presented) A method of use of the silicone gel of claim 38 comprising applying said gel to a rubber or rubber-like surface.

50. (Previously presented) A composition comprising the silicone gel of claim 38 along with components suitable for application to rubber or rubber-like surfaces.

Upon evaluating the claim submission dated January 19, 2005, the Examiner concluded that, though the claim amendments and accompanying declaration had proven sufficient to overcome most of the art rejections and rejections resulting from an on-sale bar, there remained the issue of claims 19-22, 24-27, and 29 being product-by process claims that still appeared to be anticipated by Formulation I for which there had commercial sales activity more than a year prior to filing the provisional application. (The Examiner had explained to Applicant in a telephone interview that, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on its method of production. Because Formulation I had employed a silicone oil

as the polymerization medium and a hydrocarbon oil as a diluent added after milling the gel, it was the Examiner's position that this product would be no different than obtained from the method of claim 7, which is the subject of claim 19.) Accordingly, it was concluded that the inventions disclosed in these claims would be barred from patentability due to the commercial activity surrounding Formulation I. Applicant proposed eliminating the mention of silicone oil as a diluent from claim 7, a change that the Examiner agreed would differentiate the claimed products from the product of Formulation I.

New claims 38-50 are not anticipated or rendered obvious by either Kuwata or the commercial formulations made of record insofar as neither contemplates the unsaturated compounds (2) nor would it have been obvious to add them to any of gel-forming compositions (A) to (O) or those described by *Kuwata*.

Prior to the entry of this Examiner's amendment, Applicant has corrected their summary of on-sale activity so as to reflect that a majority of the formulations set forth therein were, in fact, prepared in a manner consistent with the present invention and, hence, constituted an on-sale bar insofar as they were made available for purchase more than one year prior to the filing of a provisional application. As a means of obviating the on-sale bar, claims 1-7, 9, and 11-35 were amended such that the polymerization medium may no longer include a low-viscosity silicone oil. Indeed, now all of claims 1-35 disclose only those incarnations of the invention wherein the solvent is a hydrocarbon oil (the method claims and product-by-process claims dependent therefrom also identify lower alkanols as a potential diluent but these compounds are

never mentioned in Applicant's description of the formulations that had been made available for purchase).

Concerning the rejections over *Kuwata*, Applicant has clearly demonstrated that the gels obtained by their two approaches are different than those realized by the method outlined in the reference (the better clarity of the gels yielded by Applicant's approach is suggestive of a modified structure within the gel but the precise structural differences are not clear). Therefore, the rejections over *Kuwata* are hereby withdrawn.

In view of Applicant's illustration that the processes set forth in claims 7 and 35 do, in fact, provide a different product, the Examiner's updated search focused on finding previous instances where an analogous method had been employed to prepare silicone gels- in an earlier search of the prior art, the Examiner had limited the search to the starting materials and diluent because it had not yet been effectively shown that Applicant's technique would yield a patentably distinct product. No references more germane than those already cited were found though it should be mentioned that the cosmetics art is replete with teachings of silicone gels incorporated into low viscosity silicone oils and hydrocarbon oils alike. Therefore, claims 1-7, 9, and 11-50 are allowed.

Applicant has requested that the following remarks be made of record concerning the amendment of claims 19-22, 24-27, and 29:

Examiner Zimmer telephoned the undersigned on February 4, 2005 to explain that Applicant's Response to the outstanding final Action was generally acceptable, but that an additional issue had come to light with respect to product-by-process claims 19-22, 24-27, and 29. Examiner Zimmer had indicated that since these were product-by-process claims and the product was examined without regard to the process limitations, the products within

the claims read on Formulation I of Applicant's Information Disclosure Statement, a formulation admitted to be offered for sale more than 1 year before the priority date of the present application.

Formulation I was a product in which the polymer was polymerized in the presence of a linear polydimethylsiloxane and then diluted with both isododecane and additional amounts of the polydimethylsiloxane. Each of the claims 19-22, 24-27, and 29 depend ultimately through process claim 7. Claim 7 requires that the polymer be polymerized in the presence of a hydrocarbon polymerization media (isododecane is one such material) and then optionally is diluted with a diluent selected from hydrocarbons, silicone oils, and alkanols. The Examiner's concern was that when the optional dilution step was present and silicone oil was the diluent, a product having the same polymer, same amount of the same silicone oil, and the same amount of the same hydrocarbon as present in Formulation I would be within the claims. Applicant submits that this is not the case and that polymerization in a silicone oil results in a different materials than when polymerization takes place in the presence of a hydrocarbon. When the silicone oil is added to the polymer polymerized in the presence of the hydrocarbon a different product is achieved than when that same silicon oil is added to a polymer polymerized in the presence of the isododecane. Nonetheless, without abandoning the subject matter in question, in order to advance prosecution, the Applicant has amended claims 19-22 and 24-27 so require that for these product by process claims, the process is limited to the polymer being polymerized in the presence of the hydrocarbon and when the dilution step is practiced, the dilution is with a hydrocarbon or an alkanol. Thus, the products resulting from claims 19-22 and 24-27 cannot have any silicone fluid present. Since claim 29 depends from claim 22, it too is subject to this limitation. Thus, the Examiner's concern with respect to the product-by-process claims is overcome.

As such, all of claims 1-7, 9, and 11-50 are now ready for allowance and a Notice of allowance is respectfully requested.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 4, 2004



MARGARET G. MOORE  
PRIMARY EXAMINER